

STEP-BY-STEP

2nd Ed.

A GUIDE TO MOBILITY TECHNIQUES

REVIEW GUIDE

LONG CANE TECHNIQUES

By Sandra Rosen, Ph.D.

ACKNOWLEDGEMENTS

Text and Materials Development

Sandra Rosen

Project Leaders

Terrie (Mary T.) Terlau

Rosanne Hoffmann

Research Assistant

Lara Kirwan

Graphics and Photography

Sandra Rosen

Terri Gilmore

Bisig Impact Group

Production Team

Lila Adkins

Cary Crumpton

Darlene Donhoff

Anna Fox

Frank Hayden

David Hines

Karen Marshall

Lou Tingle

Phyllis Williams

Expert Reviewers

Nora Griffin-Shirley

Julie Hapeman

Donna Brostek Lee

Richard Long

Grace Ambrose Zaken

TABLE OF CONTENTS

Acknowledgements	2
Introduction	4
Detection	5
Diagonal	6
Touch.....	9
Touch & Slide.....	18
Congested Area.....	19
Shorelining.....	21
Diagonal Trailing	22
Touch & Drag	25
Touch Trailing	26
Three-Point.....	32
Negotiating Doors & Stairs.....	33
Negotiating Doors.....	34
Negotiating Stairs	37
Negotiating Obstacles & Reorientation.....	42
Sidewalk Recovery.....	43
Obstacle in the Travel Path	52
Vehicle in the Travel Path.....	54

INTRODUCTION

The review guides supplement the Step-By-Step series on orientation & mobility. Designed for use by students preparing to become O&M specialists and by other vision professionals alike, the review guides provide the user with a quick, sequential, and pictorial review of the mobility skills taught in the corresponding study guide and video. Whether used to prepare for a test or to provide a quick refresher when preparing to teach a new or forgotten skill, it is hoped this review guide will be of value to the user. For more detailed information about each mobility skill, please see the Step-By-Step study guides or the Step-By-Step videos included on the flash drive.

Notes for Screen Reader Users:

The format used for the review guides is a series of tables with descriptive headings immediately preceding each one. In lieu of Alt Text, a short description of each photo appears in the cell to the left of that photo.

DETECTION

DIAGONAL

Standard

The traveler holds her cane hand in line with her shoulder and 6–8 inches in front of her near hip.

She lowers her grasp on the grip; the top of the grip extends 1–2 inches beyond the widest part of her body.



She holds the cane with the handshake grasp; the back of the hand faces upward and the forefinger extends along the shaft of the cane.

- The traveler can use the pencil grasp as an alternative to the handshake grasp.



The traveler holds the cane diagonally across her body; the tip and grip each extend 1–2 inches outside of the body width.



The cane tip either touches the ground...



...or is held 1–4 inches above the ground.



Turning

When preparing to turn, the traveler pauses and pulls the cane tip back to her feet.



After listening to be certain that no pedestrians are passing by in the immediate area of her new travel path, the traveler turns and assumes proper cane position. She then resumes travel.



TOUCH

Standard

Posture

The traveler's shoulders, trunk and feet face forward.



Handshake Grasp

Grasping the cane so that the top end of the grip is at or slightly above his wrist joint, the traveler points his index finger down the grip. He holds his index finger flat against the side of the grip.

The traveler wraps his remaining fingers around the grip, with his thumb either:

- Resting against his middle finger, or
- Resting on top of the grip and pointing down the shaft.



Arm and Hand Position

The traveler's upper arm hangs naturally at his side; his hand is about waist height and positioned at midline. He holds his hand about 6–8 inches in front of his trunk.

- The back of the traveler's hand faces to the side and his thumb rests on top of the grip.



Wrist Motion

As the traveler walks, he swings the cane to the right...



...and left by bending his wrist.

He holds his forearm still and does not allow it to rotate.



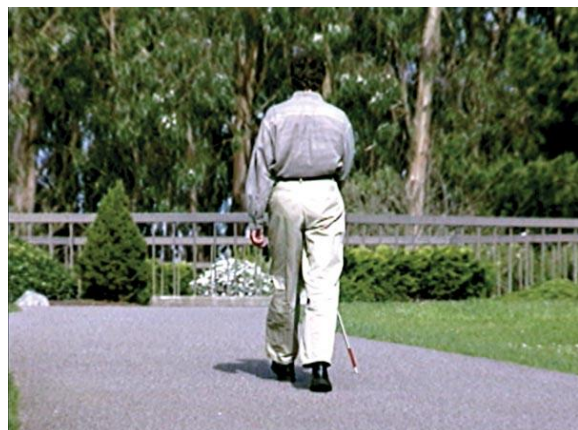
Arc Width

The traveler touches the cane tip to the ground 1–2 inches beyond his body width on each side.

Important TOUCH TECHNIQUE

Note:

In actual travel, the traveler should always clear before taking his first step in order to find any obstacles or hazards located immediately in front of his feet. (A white two-headed arrow in the photo indicates the cane motion.)



Arc Height

As he walks, the traveler allows his body motion to naturally lift the cane 1–2 inches above the ground in the middle of each arc. (A white two-headed arrow in the photo indicates the arc.)



In-Step

The traveler touches the cane tip to the ground at the end of each arc as his opposite heel touches down. This is referred to as being “in step.”



Constant Contact

The traveler performs the TOUCH technique, with the cane tip contacting the walking surface at all times. (A white, curved, two-headed arrow indicates cane motion.)



Turning

When preparing to turn, the traveler pauses and pulls the cane tip back to his feet.



After listening to be certain that no pedestrians are passing by in the immediate area of his new travel path, the traveler turns and...



...then resumes travel.



Correcting In-Step

Extra Arc

The traveler pauses or slows his pace slightly...



...sweeps the cane in an extra arc...



...and then takes his next step.



Tapping Twice on the Same Side

The traveler taps the cane on the same side...



...for two consecutive steps.



He then resumes the TOUCH technique.



TOUCH & SLIDE

Standard

The traveler performs the TOUCH technique but lets the cane tip remain in contact with the walking surface and...



...slide slightly forward at the end of each arc. (In each photo, a short white arrow indicates the forward movement of the cane.)



CONGESTED AREA

Touch

Holding the cane below the grip, the traveler performs the TOUCH technique while walking at a slow pace. She maintains the normal arc width.



Diagonal

Holding the cane below the grip, the traveler performs the DIAGONAL technique while walking at a slow pace. She maintains the normal arc width.



SHORELINING

DIAGONAL TRAILING

Standard

Holding her cane in the hand opposite the vertical surface being followed, the traveler performs the DIAGONAL technique. The cane tip touches the surface lightly:

- In the junction of the surface and the floor, or



- 1–4 inches above the floor.



Crossing an Opening

Upon reaching the edge of opening, the traveler anchors the cane; she walks up to the edge and pauses.



The traveler listens for people who may be passing through the opening. When it is clear, the traveler crosses using the DIAGONAL technique.

- To cross an open doorway, the traveler uses the same method she used to cross the hallway.



Turning

Upon reaching the edge of an open doorway or intersecting hallway, the traveler anchors the cane, walks up to the edge, and pauses.



The traveler listens for people who may be passing through the doorway or hallway. When it is clear, the traveler turns the corner, maintaining the cane tip in contact with the wall, and continues traveling.



TOUCH & DRAG

Standard

Walking next to the shoreline, the traveler performs the TOUCH technique with the following modifications:

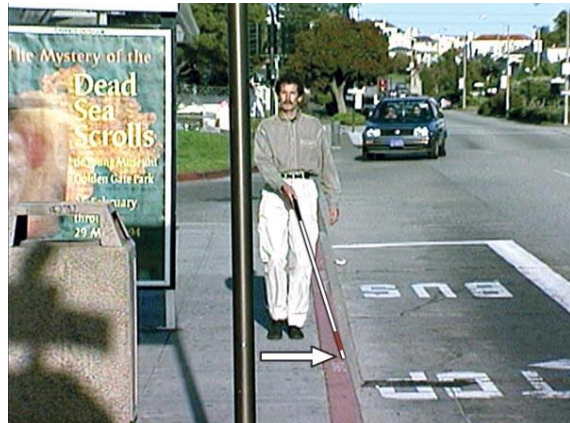
- He uses a standard arc (indicated here by a curved white arrow) when moving the cane from the shoreline to the opposite side.



- He drags the cane tip along the ground on the return arc (indicated here by a straight white arrow) toward the shoreline.

If the traveler misses two consecutive contacts with the shoreline, he should angle back toward it to relocate it.

Note: Travelers can choose to perform this skill in conjunction with the TOUCH (Constant Contact) technique.



TOUCH TRAILING

Along a Vertical Surface

Walking slowly next to a wall or other vertical surface, the traveler performs the TOUCH technique, allowing the cane tip to contact the vertical surface 1–4 inches above the ground.



Along a Horizontal Surface

The traveler walks next to the shoreline using the TOUCH technique; she extends the arc slightly on the side of the shoreline to ensure that the cane tip touches down 1–2 inches beyond the edge of the shoreline.



Crossing an Opening

When the traveler's cane tip contacts an opening (e.g., open doorway or intersecting hallway), she anchors the cane at the edge of the opening and walks up to it. The traveler listens for people passing through the opening.



When it is clear, the traveler crosses the opening using the TOUCH technique.

- The traveler may use alignment components of the TRAVERSING OPEN SPACES technique (e.g., trunk rotation, squaring-off) while crossing the opening in order to more easily locate the wall (or other vertical surface) on the opposite side.



Turning

Upon reaching the opening, the traveler anchors the cane and walks up to it.

She listens to be certain that no pedestrians are in her projected travel path.



When it is clear, the traveler turns the corner, maintaining the cane tip in contact with the wall, and continues traveling.



Locating a Narrow Opening or Objective

The traveler performs the TOUCH TRAILING technique in conjunction with the CONGESTED AREA technique.



Locating a Higher Objective Along a Vertical Surface

The traveler performs the TOUCH TRAILING technique, allowing the cane tip to...



...contact the vertical surface 6–8 inches above the ground.



THREE-POINT

Standard

The traveler walks next to and below the shoreline; she performs a variation of the TOUCH technique, in which she touches the cane tip to the ground at three points per cycle:

1. On the side away from the shoreline, then
2. On the vertical surface of the shoreline, then
3. Above the shoreline.



NEGOTIATING DOORS AND STAIRS

NEGOTIATING DOORS

Standard

Upon contacting the door, the traveler anchors the cane tip against it. He uses the CONTACTING & EXPLORING OBJECTS technique to walk up to an extended-arm distance from the door.



The traveler positions the cane vertically with the shaft flat against the door and the tip raised 1 inch off the ground.

He slides the cane shaft to one side and then, if necessary, to the other side to locate the door handle.

- Placing slight pressure on the cane when first placing it against the door may help the traveler to distinguish between a push door and a pull door.



Alternatively, instead of finding a handle, the traveler may find that the door has a push bar (confirmed by the pivot of his cane shaft against it).

- Pushing gently on the bar may help identify whether the door opens to the left or right.



The traveler anchors his cane against the door handle or push bar. He then transfers the cane, if necessary, to the hand nearest the latch side of the door. He slides his free hand down the cane shaft to contact the door handle or push bar.



The traveler opens the door. He clears with his cane on the other side of the threshold and...



...then walks through the doorway.

- For manually closing doors, the traveler will locate the doorknob on the other side of the door and then pull or push the door closed behind him.



Automatic Doors

The traveler stops walking when he either steps on the mat, presses the activation plate, or hears the automatic door start to open.



After hearing the door open fully, the traveler continues forward.

- If the traveler encounters a door designed for traffic moving in the opposite direction, he should step out of the way of oncoming pedestrians and then search with his cane to each side to locate the desired door.



NEGOTIATING STAIRS

Ascending

The traveler contacts the riser of the first step with her cane tip. She anchors her cane tip against the riser and walks up to the step, positioning her cane as in the CONTACTING & EXPLORING OBJECTS technique.



The traveler holds her cane vertically and slides the cane shaft left and right along the riser of the first step (shown here by a straight, white, two-headed arrow) to verify that she is aligned perpendicularly to the stairs.

If the traveler is unfamiliar with the stairs, she also:

- Slides her cane tip up from the floor to the top of the first riser, determining the height of the steps, and
- Slides her cane tip forward along the tread of the first step to the second riser, determining the depth of the steps.



The traveler positions the cane tip against the riser 1–2 steps ahead of her, 1 inch below the stair edge. She holds the cane either vertically or semi-vertically, covering no more than her body width.



Climbing the stairs, the traveler allows the cane tip to contact each riser gently.



At the landing, she clears with the cane (indicated here by a white, curved, two-headed arrow) as she climbs the final 1–2 steps.



Descending

The traveler locates the edge of the first step with her cane tip.

Anchoring the cane against the edge of the top step, the traveler walks up to her cane.



The traveler holds her cane vertically against the edge of the first step and slides it from side to side approximately one body width to verify that she is aligned perpendicularly to the stairs (a white, straight, two-headed arrow shows the cane motion).



Note:

If the traveler is unfamiliar with the stairs, she also:

- Slides her cane down to the first step, determining the height of the steps, and
- Slides her cane tip forward to the edge of the first step, determining the depth of the steps.

The traveler holds the cane in the **DIAGONAL** position with the cane covering no more than her body width. She positions the cane tip suspended in the air 1–2 inches above the edge of the first or second step below and then descends the stairs.



At the landing, the traveler clears with the cane as she walks down the final 1–2 steps (a white, curved, two-headed arrow shows the cane motion).



Locating the Handrail

The traveler anchors her cane and walks up to the first step. She reaches her free hand forward and to the side in order to locate the handrail.



- If she fails to locate the handrail, the traveler turns to the side and listens to be certain that other people are not crossing her path. She then follows the first step to the side of the stairway using the THREE-POINT technique (for ascending stairs) or the TOUCH & DRAG technique (for descending stairs).



Turning to face the stairs, the traveler then reaches her hand forward and to the side to locate the handrail.



NEGOTIATING OBSTACLES AND REORIENTATION

SIDEWALK RECOVERY

Recovery From a Veer

The traveler stops walking when she feels her cane tip contact a shoreline in front of her.



Keeping her feet stationary, the traveler slides her cane along the edge of the shoreline (indicated here by a white, straight, two-headed arrow) to determine its precise location and her relative alignment to it.

- The traveler can “square-off” her toes to the shoreline to establish a perpendicular alignment to it.



Note: The height of the grass makes it appear that the traveler’s toes are touching the shoreline. Squaring-off, however, does not necessitate physically contacting the shoreline with her toes.

The traveler reaches her cane forward and sweeps it 45–90 degrees to each side (as necessary) to locate the original sidewalk (a white, curved, two-headed arrow indicates the cane motion).



If the traveler does not locate the sidewalk immediately, she can walk toward the parallel street using the TOUCH & DRAG or TOUCH TRAILING technique to relocate the sidewalk.



If the traveler contacts the street before locating the sidewalk...



...she reverses her direction to travel away from the parallel street and uses the TOUCH & DRAG or TOUCH TRAILING technique to locate the sidewalk.



Locating an Intersecting Sidewalk: Following the Parkway

Upon reaching the corner...



...the traveler turns away from the parallel street.



The traveler clears to locate the intersecting sidewalk.



- If she locates the sidewalk, the traveler resumes travel in her desired direction.



- If she locates a parkway, the traveler turns away from the street that was perpendicular to her original line of travel.



- She uses the TOUCH & DRAG or TOUCH TRAILING technique to follow the parkway until she locates the intersecting sidewalk.



The traveler then resumes travel in her desired direction.



180-Degree Turn

Upon reaching the corner, the traveler turns around...



...placing the perpendicular street at her back.



The traveler takes 2–3 steps...



...then turns in her desired direction.



The traveler clears to locate the intersecting sidewalk.

- If she locates the sidewalk, the traveler resumes travel in her desired direction.
- If she detects a parkway or other obstacle, the traveler again turns away from the perpendicular street and repeats the process until she locates the sidewalk. She then resumes travel in her desired direction.



Regaining Line of Travel

When the traveler identifies a veer toward the shoreline...



...she turns her trunk (not her entire body) in the desired direction of travel...



...and continues walking.



OBSTACLE IN THE TRAVEL PATH

Standard

Upon contacting an object, the traveler simply pauses or anchors her cane against the object and walks up to it using the CONTACTING & EXPLORING OBJECTS technique.



The traveler reaches to each side with her cane...



...to locate the continuation of the sidewalk.

If she locates the continuation of the sidewalk, she may simply walk around the obstacle on that side.



If she does not find the continuation of the sidewalk, the traveler trails to the end of the object using the TOUCH TRAILING or TOUCH & DRAG technique.

- If the obstacle only partially blocks the sidewalk, the traveler trails to the end of the obstacle, then turns and projects a straight line of travel in her original direction.
- If the obstacle completely blocks the sidewalk, the traveler trails around the end of the obstacle to a point on the sidewalk that is opposite where she initially contacted the obstacle. She then projects and follows a straight line of travel forward.



VEHICLE IN THE TRAVEL PATH

Standard

Upon contacting a vehicle in the travel path, the traveler stops.

- If the traveler encounters a vehicle with its engine running, she should stay back and wait for the vehicle to move out of the way before continuing.

Note: Electric and hybrid vehicles often make no sound when idling. The traveler must use extreme caution when moving around a vehicle in her travel path.



Using the OBSTACLE IN THE TRAVEL PATH technique, the traveler trails around the vehicle to its opposite side.



- If the vehicle partially blocks the sidewalk, the traveler trails toward the parallel street and around the end of the vehicle, then projects and follows a straight line of travel forward.



- If the vehicle completely blocks the sidewalk, the traveler trails toward the parallel street and around the end of the vehicle...



...to a point on the sidewalk that is opposite where she initially contacted the vehicle. She then projects and follows a straight line of travel forward.

- If the vehicle protrudes into a lane in which there might be moving traffic, the traveler trails around the vehicle on the side away from the parallel street.



Note: The traveler uses the UPPER HAND & FOREARM (Modified) technique when trailing around a van or truck.



American Printing House for the Blind, Inc.
1839 Frankfort Avenue
P.O. Box 6085
Louisville, Kentucky 40206-0085
Phone: 502-895-2405
Toll Free: 800-223-1839
Fax: 502-899-2274
Email: info@aph.org
Website: www.aph.org

Step-By-Step, 2nd Ed.
REVIEW GUIDE
Long Cane Techniques

Copyright © 2021

Catalog Number 8-75982-00